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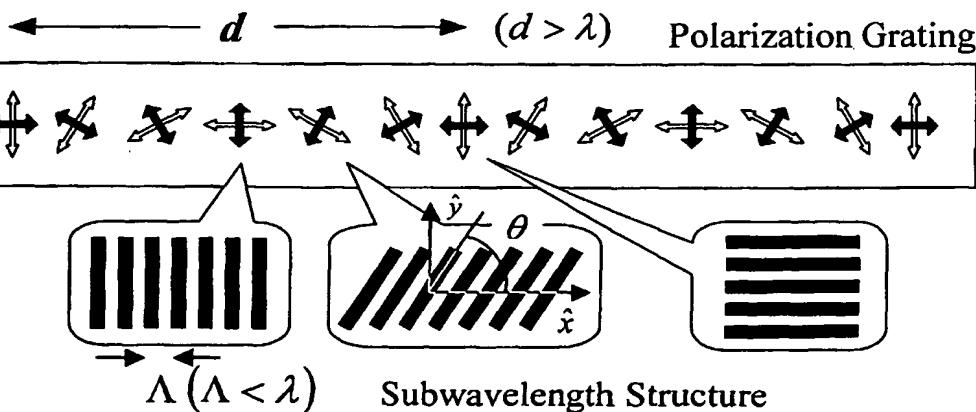
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(54) Title: GEOMETRICAL PHASE OPTICAL ELEMENTS WITH SPACE-VARIANT SUBWAVELENGTH GRATINGS



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(57) **Abstract:** A space variant polarization optical element for spatially manipulating polarization-dependent geometrical phases of an incident light beam. The element comprises a substrate with a plurality of zones of gratings with a continuously varying orientation. The orientation denoted by $\theta(x-y)$ is equal to half of a desired geometrical phase (DGP) modulus 2π . Each grating has a local period that is smaller than the wavelength of the incident light beam. In other embodiments of the present invention the substrate comprises a plurality of zones of gratings with a continuously varying orientation.